

# Lake Pontchartrain Barrier

## Structural Protection

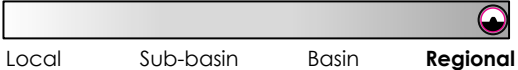
Project ID: 001.HP.08



### Description

Construction of closure gates and weirs to an elevation of 2 feet NAVD88 across the passes at Chef Menteur and the Rigolets for storm surge risk reduction within the Lake Pontchartrain Basin. Project features approximately 5,200 feet of earthen levee, 630 feet of a combi-wall weir constructed to 2 feet, a 150-foot closure gate at each pass for navigation, and multiple vertical lift gates to maintain tidal exchange through the passes.

### Scale of Influence



### Project Location

Orleans Parish; St. Tammany Parish

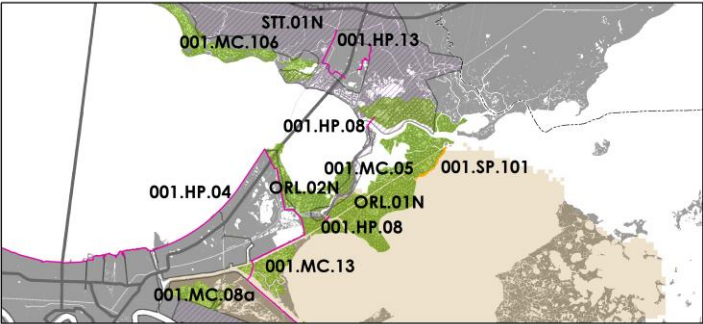
### Project Duration

Planning, Engineering, and Design is estimated to take 3 years.  
Construction is estimated to take 3 years.

### Project Cost Estimate

	Estimated Cost
Planning/Engineering & Design	\$374,000,000
Construction	\$1,941,100,000
Operations & Maintenance	\$94,500,000
<b>Total</b>	<b>\$2,409,600,000</b>

### Other Nearby Projects in the Master Plan



### Other Project Area Statistics

<b>Estimated Current Population</b> U.S. Census (2010), U.S. Dept. of Energy Oak Ridge National Laboratory, Land Scan (2011)	737,900
<b>Percent of Population who are Low-to-Moderate Income</b> American Community Survey (2006 - 2010)	41%
<b>Number of Severe Repetitive Loss Properties</b> Governor's Office of Homeland Security (2015)	11,458

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### Economic Damage

Structural protection projects are evaluated by how they reduce Expected Annual Damage (EAD) for a particular area. EAD represents the average direct economic damage projected to result from storm surge flooding events, from Category 1 or greater storms, in any given year, taking into account both the expected damage and the overall frequency of such storms occurring. EAD is a summary measure of the potential damage averaged over the entire distribution of possible flood events. Damage is also summarized at various return periods (DRP), e.g., 100-year damage being the damage with a 1% chance of occurring or being exceeded in a given year. The following are the economic damage summaries for the Future Without Action (FWOA) and Future With Project (FWP) conditions, for the project as a whole (Table 2), and for each Risk Region (Table 3). EAD and DRP values are reported in millions of dollars.

Table 2: Expected Annual Damage

Year	FWOA	FWP	Difference
0	\$1,489 M	-	-
25	\$3,241 M	\$2,284 M	\$958 M
50	\$8,088 M	\$6,845 M	\$1,243 M

### Critical Infrastructure

The data in Table 1 was provided by GOHSEP and the Homeland Security Infrastructure Program (HSIP). "Protected" assets are those that otherwise flood in FWOA conditions but are protected by the project.

Table 1: Critical Infrastructure Counts

Asset Type	Protected	Total
Airport Facility	-	-
Gas Processing	-	3
Government/Military	-	3
Electric Power Substation	4	104
Liquefied Natural Gas Terminal	-	-
Louisiana Offshore Oil Port	-	-
Manufacturing/Chemical	-	15
Electric Power Plant	1	37
Port	-	3
Petroleum Pump Station	-	1
Refinery	-	9
Water and Sewer	-	16
Strategic Petroleum Reserve	-	-
Total	5	191

Table 3: Economic Damage by Return Period at Year 50

Risk Region	50 Year		100 Year		500 Year	
	FWOA	FWP	FWOA	FWP	FWOA	FWP
Ascension - Prairieville/Sorrento	\$17,222 M	\$12,911 M	\$19,043 M	\$14,059 M	\$19,809 M	\$15,039 M
Jefferson - Kenner/Metairie	\$1,885 M	\$1,526 M	\$10,376 M	\$2,484 M	\$145,548 M	\$131,211 M
Livingston	\$1,315 M	\$1,166 M	\$1,536 M	\$1,308 M	\$1,577 M	\$1,410 M
Orleans - Lake Catherine	\$340 M	\$340 M	\$342 M	\$340 M	\$351 M	\$350 M
Orleans - New Orleans	\$9,913 M	\$8,794 M	\$23,194 M	\$20,497 M	\$78,145 M	\$72,346 M
Orleans - Rigolets	\$131 M	\$132 M	\$132 M	\$132 M	\$132 M	\$132 M
Plaquemines - Braithwaite	\$331 M	\$329 M	\$333 M	\$330 M	\$336 M	\$334 M
Plaquemines - Phoenix/Pointe A La Hache	\$200 M	\$198 M	\$201 M	\$198 M	\$201 M	\$199 M
St. Bernard	\$283 M	\$276 M	\$748 M	\$840 M	\$13,580 M	\$14,157 M
St. Bernard - Yscloskey/Delacroix	\$265 M	\$265 M	\$265 M	\$265 M	\$265 M	\$265 M
St. Charles - Destrehan	\$21 M	\$21 M	\$21 M	\$21 M	\$45 M	\$32 M
St. Charles - Montz	\$48 M	\$25 M	\$101 M	\$52 M	\$196 M	\$96 M
St. James - Convent	\$2,431 M	\$1,939 M	\$2,703 M	\$2,071 M	\$2,955 M	\$2,150 M
St. John the Baptist - Garyville	\$141 M	\$133 M	\$166 M	\$137 M	\$217 M	\$146 M
St. John the Baptist - Laplace/Reserve	\$17,216 M	\$14,007 M	\$20,053 M	\$17,716 M	\$25,432 M	\$21,853 M
St. Tammany	\$27,738 M	\$24,758 M	\$41,354 M	\$38,120 M	\$54,813 M	\$50,991 M
St. Tammany - Slidell	\$18,532 M	\$18,022 M	\$21,568 M	\$21,325 M	\$25,013 M	\$25,037 M
Tangipahoa	\$583 M	\$391 M	\$961 M	\$526 M	\$1,572 M	\$990 M
Total	\$98,596 M	\$85,231 M	\$143,098 M	\$120,424 M	\$370,186 M	\$336,736 M